

Data Collection Activity

1. Name of Activity : SLINKY AND M&M'S

2. Describe the procedure for the experiment. _____

3. The independent variable, x , represents _____

Units _____

The dependent variable, y , represents _____

Units _____

Data Collection

Independent	Dependent

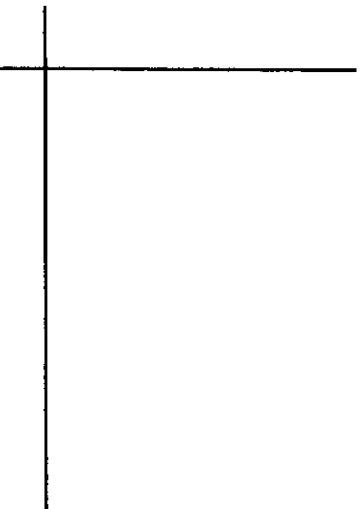
Points to be plotted (L1,L2)



4. Enter your data in L1 and L2 of your calculator. Turn on PLOT1 from your STAT PLOT menu and select the scatterplot option. Set up your WINDOW to get a good view of your data points and plot the data. Draw a diagram of the experiment below and indicate the window you used on your calculator.

[Xmin,Xmax]: _____

[Ymin,Ymax]: _____



5. Trace your data points to find two points that best represent the data. These points are:

() and ()

6. Use these points to find the **slope** of the line and then the **equation** of the line. (You will need to find the value of "b" in the $y = mx + b$ form of the line!) Decimals are OK for slope and y-intercept. Show your work.

Slope: _____ (Fraction)
 _____ (Decimal)

Equation: $y =$ _____ $x +$ _____

7. Put the decimal form of the equation of the line into Y1 of your graphing calculator and graph it to see if it is a good representation of the data. If it is not find your mistake and change it!

8. Rewrite the decimal form of the equation using **names of variables** instead of **x** and **y**.

[illegible]

9. What does the slope represent? _____

10. What does the **y-intercept** represent?

11. Additional Questions:

According to your model/equation,

1. How high should the cup be from the ground if it were empty; i.e. it had zero M&M's in it? _____ Try it!

How close was your prediction? _____

2. How many M&M's would make your cup "just touch" the ground? _____ Try it!

How close was your prediction? _____

3. How would a "stiffer" slinky affect your equation? _____